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ABSTRACT

Current National Council for Accreditation of Teacher Education (NCATE) standards for schools of education focus upon the inclusion of broad knowledge bases that are developed from sound theories and scholarly inquiry. By mandating that each accredited unit develop a teacher education program founded upon broad knowledge bases, NCATE is effectively requiring some teacher education programs to alter current curricula and practices. The operational definition of "knowledge base" which forms the basis for this paper is drawn from Valli and Tom (1989): "the entire repertoire of skills, information, attitudes, etc., that teachers need to carry out their classroom responsibilities." Use of the model presented here is designed to insure a professional education program that is coherent from program philosophy through program evaluation. The model provides for faculty collaboration in the content and design of the curriculum. The use of the model will provide a systematic and orderly process to develop a defensible knowledge-based curriculum in professional education. (JD)

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A Model For Implementing a Knowledge-Based Curriculum in Teacher Education

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A Model For Implementing a Knowledge-Based Curriculum in Teacher Education

The National Council for Accreditation of Teacher Education (NCATE) has established standards designed to ensure that teacher education programs maintain high academic standards and that program graduates are of a high quality. To achieve these goals the organization has developed a process whereby professional expectations are developed and promulgated through published standards and monitored by peer review.

An examination of NCATE standards provides insights into areas of teacher education perceived to be in need of attention from a national perspective. The 1987 standards reflect an effort to improve professional education by encouraging experimentation and innovation in institutional planning. Current standards focus upon the inclusion of broad knowledge bases that are developed from sound theories and scholarly inquiry. By mandating that each accredited unit develop a teacher education program founded upon broad knowledge bases, NCATE is effectively requiring some teacher education programs to alter current curricula and practices.

Historically, some teacher education programs have been experience based. Rather than focusing instruction upon pedagogical theories and research, these programs tend to transmit folkways from one generation to the next through faculties' stories and clichés. Current NCATE standards, however, require that accredited teacher education programs be "based on essential knowledge, established and current research findings, and sound professional practices" (NCATE p. 37).

NCATE standards further mandate that each program be coherent from an explicitly stated philosophy through the measurements of program outcomes. This coherency must be achieved through faculty collaboration and be reflected in:

> ". . . curricular design and planning; course syllabi; instructional design, practice, and evaluation; students' work; use of major journals in the field by faculty and students; and faculty and students' (especially graduate students) participation in research and synthesis," (NCATE p. 37).

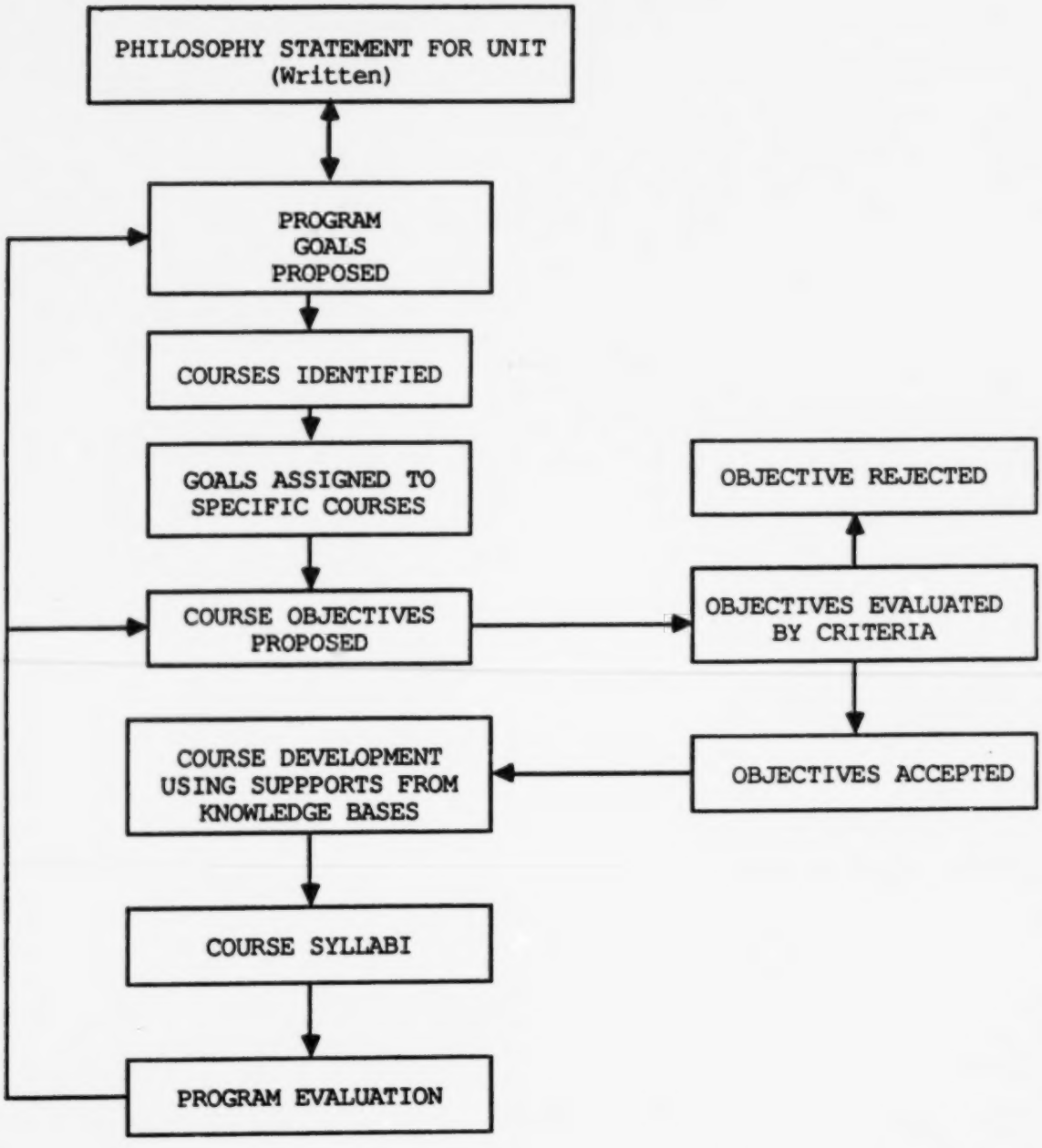
The faculty of each teacher education unit must collaborate to develop a coherent curriculum that is founded upon a defensible knowledge base in order to receive accreditation. While the standards clearly indicate the NCATE expectation, procedures used to achieve these must be developed and implemented by each teacher education unit.

Prior to developing a process of identifying and implementing a teacher education program that will meet the spirit and intent of NCATE standards, a workable operational definition for knowledge base must be devised. A definition is noticeably absent from the NCATE (1986) glossary of terms. Wisniewski (1989) describes the knowledge base as the intellectual heritage of practitioners which is used to validate or challenge ones scholarship in professional endeavors. Valli and Tom (1989) operationally define the knowledge base to mean "the entire repertoire of skills, information, attitudes, etc. that teachers need to carry out their classroom responsibilities," (p. 5). This definition will be used in the model presented in this paper.

To meet NCATE standards each unit must develop an orderly process in institutional planning which identifies the knowledge, skills and attitudes that are needed by professional teachers. Additionally, the process must include provisions for faculty members to collaborate in developing a coherent and defensible knowledge-based curriculum. The model (Chart 1) presented in this paper is designed to help faculty members accomplish this task.

Chart 1

A MODEL FOR IMPLEMENTING A KNOWLEDGE BASED CURRICULUM



Philosophy Statement for the Unit

The first task that must be accomplished in implementing the knowledge-based curriculum is to answer some of the most basic and perennial education questions such as:

What is the purpose of education?
What should be taught in American schools?
How do children learn?

As a teacher education faculty processes these and other such questions, the unit's philosophic foundation is being reexamined. While conflict is expected in the attempt to answer these critical inquiries, some agreement can be found. From the common body of accepted positions, a tentative philosophical statement can be formulated. When a teacher education unit develops and approves a written document that identifies its philosophic positions, the process of developing a knowledge base can continue.

Program Goals Proposed

To identify specific elements of the knowledge base for a teacher education unit, this basic question can be considered:

What does a teacher need to know, feel, and be able to do to function effectively?

A unit's answer to this question can lead to the formation of goal statements. As each potential goal statement is contemplated, however, consideration must be made as to its agreement or lack of agreement with the stated philosophical assumptions.

Any disagreement will necessitate a reconsideration of both elements of the model, philosophy, and goals. Both elements are tentative. When coherence between philosophy and goals is established, the process can continue.

Course Identification and Goal Assignment

After program goals are established for the unit, the professional education faculty will identify the goal or goals to be taught in each course. Courses should be included in the professional education program that best accommodate program goals. Some new courses may need to be developed, while some existing courses may need to be altered or discontinued. Program goals, rather than historical presidence, should determine a unit's professional education course offerings.

As courses are identified in the professional education sequence, care must be taken to ensure that each program goal has been assigned to a particular course and that no goal has been unnecessarily duplicated. This can best be accomplished by developing a matrix.

Course Objective Proposed

After the goals for each professional education course has been ascertained, faculty members will propose tentative objectives for each goal assigned to their respective courses. At this point in the process, the program content is becoming quite specific and the knowledge base must be continually monitored to ensure program viability.

Objectives Evaluated by Criteria

The knowledge base is not a set of rigid principles that determines the scope and sequence of an undergraduate teacher education program. Rather, it is a best-yet product derived from a continuous process of scholarly inquiry. In reality, the process used in determining the knowledge base for beginning teachers is as important as the product.

New knowledge is continuously being produced as teachers and teacher educators practice philosophical reflection, develop new theories, find new answers using research, or make observation as they observe educational practices. While these processes yield new knowledge, not all of the knowledge can or should be included in the undergraduate teacher education program.

To judge the knowledge that should be included in an undergraduate teacher education program, several questions need to be asked. The first criterion by which the knowledge should be judged is utility. Knowledge included in the undergraduate teacher education program should be useful. The knowledge should be useful in guiding practices, in assisting teachers, in understanding the behavior of children, or in assisting teachers to better understand the dynamics of the teaching and learning process.

The second criterion by which knowledge included in the teacher education program should be judged is its comprehensiveness. An effective teacher education program must present alternative points of view to allow future teachers to evaluate the worth of competing theory bases and practices before making professional decision.

Third, the knowledge base that promotes understanding and perspective among students should be presented. The content, skills and attitudes presented, practiced, and encouraged should be structured in ways to ensure that students do not view the knowledge base as a set of rigidly prescribed steps to be followed, but rather as principles that may have application in a given situation. Beginning teachers must realize that an effective teacher education program helps prepare them to make professional decisions in accord with the conditions of a given situation.

A fourth criterion is that knowledge should be included in the undergraduate teacher education program that assists students in developing more comprehensive theoretical bases. Specific elements of knowledge which fit into a larger theoretical base should be considered more valuable than a bit of knowledge that is unrelated to other knowledge.

Fifth, knowledge should be included in the teacher education curriculum that is based upon and supported by research. Students should be taught that knowledge based upon experience is thinking an experience has value, but many errors can be made using experience as a primary determinant of professional behavior. Students should be warned that experience-based decision tend to lead to stimulus generalizations in which one experience principle will be used in times and situations that are totally out of context with the experience that precipitated its creation.

Those objectives that can meet one of the five criteria can then be included in the appropriate professional education course on a tentative basis. This objective must further be found to be acceptable during the process of course development.

Course Development Using Supports from the Knowledge Bases.

Content derived from objectives that are included in a particular professional education course must be scrutinized from several perspectives. This examination is designed to ensure that the content taught is based upon a sound knowledge base and is not the reminiscences of public school experiences. This process is designed to insure that the content taught can be supported by philosophical, theoretical research and/or experience foundations.

The following table (Table 1) can be used to identify and justify the inclusion of elements of the knowledge base for each course goal. In the first column, Knowledge Base Objectives, specific course objectives that facilitate goal attainment will be delineated. The knowledge base support is presented in the remaining columns. Support for the knowledge base may be philosophical, theoretical, research and/or experiential. Every objective should be supported by at least one of these factors.

An objective may be supported by a philosophical basis. An objective may be related directly or indirectly to the philosophical position component previously developed. If possible, the specific philosophical position from the document related to the objectives should be identified.

Support for the inclusion of an objective may come from a theoretical basis. For example, an objective might be related to a theoretical model such as cognitive field theory or behaviorism. If possible, the theoretical basis should be included as a support for the objective.

Class _____ Goal Statement _____

10 Instructor(s) _____

Objective: at the end of this course, students will:	Philosophical Support	Theoretical Support	Research Support	Experience Support

12

13

Research should be included as support for an objective whenever possible. Research that will be presented to students should be identified, including conflicting findings, whenever possible. Assistance should be provided to enable students to evaluate objectively the quality of findings presented.

The last column of Table 1 is provided to justify those objectives that cannot be supported by any other means. It should be reserved for those objectives that are suspected to be valuable and true but which cannot or have not been empirically substantiated. If objectives are presented using only the experience basis, students should be informed of the lack of support.

Course Syllabi

The course syllabi produced using the model described in this paper should contain highly specific course expectations. An NCATE team should be able to ascertain from the course syllabi the content taught in each course and the methods used to instruct and evaluate the content. The role that each course plays in the total program should be evident to any trained observer.

Program Evaluation

Program evaluation of a knowledge-based professional education program necessitates the use of both summative and formative evaluation techniques. The knowledge-based program provides specific content to be taught and learned. The

measurement of each student's mastery of content contained in the curriculum is imperative for determining not only student growth but also for determining program effectiveness.

Program effectiveness must also employ formative evaluation techniques. Follow-up studies of recent graduates, peer review, and surveys of graduates' supervisors will provide needed information to continually reexamine the effectiveness of the program and to make needed adjustments and revisions.

Summary

The model presented in this paper was designed to assist the faculties from professional education units to implement a knowledge-based teacher education program. Its use will insure a professional education program that is coherent from program philosophy through program evaluation. The model provides for faculty collaboration in the content and design of the curriculum. The use of the model will provide a systematic and orderly process to develop a defensible knowledge-based curriculum in professional education.

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